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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,961	04/25/2001	Katsuyuki Tanaka	029471-0149	5695
22428	7590	08/04/2004	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			LIN, WEN TAI	
			ART UNIT	PAPER NUMBER
			2154	

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/840,961	Applicant(s) TANAKA, KATSUYUKI 	
	Examiner Wen-Tai Lin	Art Unit 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2001 and 23 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 18, 19, 25-29, 33, 34, 40 and 41 is/are rejected.
- 7) ☒ Claim(s) 15-17, 20-24, 30-32 and 35-39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers


- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/25/01, 12/23/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-41 are presented for examination.
2. Claims 1-7, 10-24, 26, 28-29, 34, 37 and 39 are objected to because the following terms lack antecedent basis:
 - In claim 1, "the network components";
 - In claim 1, "the configuration changes";
 - In claim 2, "the appropriate configuration information";
 - In claim 2, "said temporary tree";
 - In claim 3, "the map data";
 - In claim 6, "said network configuration information control means";
 - In claim 6, "the search result";
 - In claim 6, "said network configuration data store means";
 - In claim 7, "the past network configuration information";
 - In claim 10, "the map data";
 - In claim 10, "the processing steps";
 - In claim 11, "the directory class";
 - In claim 11, "said new entry";
 - In claim 14, "the appropriate temporary map entry";
 - In claim 19, "said network configuration data management apparatus";

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In claim 26, "the appropriate additional entry";

In claim 28, "the program code";

In claim 29, "the appropriate temporary map entry";

In claim 34, "said network configuration data management apparatus";

In claim 37, "the program code"; and

In claim 39, "said log map entry".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Hayball et al.[U.S. Pat. No. 6308174].

5. As to claim 1, Hayball teaches the invention as claimed including: a network configuration data management system comprising:

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storage means for providing storage management facilities, said storage means storing:

a current map [i.e., a current MIB] for containing information represented as a current network configuration information, and a temporary map [i.e., a future MIB] for containing information for the network components for which the configuration changes are expected to occur at any future time and/or information for network components for which the configuration changes occurred at any past time [Abstract; Fig.1; col.3, line 66 – col.4, line 14]; and

means for generating network configuration information that is applicable to any time relative to a particular time later than the current time and/or relative to a particular time earlier than the current time, based on the information in said current map and the information in said temporary map [col.6, lines 5 – 17].

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-14, 18-19, 25-29, 33-34 and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayball et al.(hereafter "Hayball")[U.S. Pat. No.

6308174], as applied to claims 1 and 40-41 above, further in view of Stevens et al.(hereafter "Stevens")[U.S. Pat. No. 6539425].

8. As to claim 2, Hayball teaches the invention substantially as claimed including:
a network configuration data management system comprising:

a current map tree for containing current network configuration information organized into a tree structure, and a temporary map tree for only containing information for network components organized into a tree structure and for which configuration changes are expected to occur at any future time [Abstract; Fig.1; col.3, line 66 – col.4, line 14];

means responsive to a request for a network configuration information applicable to any future time from an external requester, for issuing a request to access said current map and said temporary map and obtaining the appropriate configuration information as requested by the requester [col.9, lines 39-52; e.g., a user may decide to upgrade certain portion of the network by requesting changes of relevant configurations (Fig.8; col.4, line 51 – col.5, line 9; col.11, lines 6-24) via, e.g., SNMP] ; and

means for merging the configuration information obtained from said current map together with the configuration information obtained from said temporary, generating a network configuration information applicable to the time specified by the requester, and returning the generated network configuration information to the requester [col.13, lines 43 – 65].

Furthermore, Hayball teaches that each MIB is a management information model or management information tree, wherein the management information model defines the structure or format for the management information to be stored within the database itself [col.4, line 66 – col.5, line 3].

Hayball does not specifically teach that (1) the system comprises a directory server for storing the current map (i.e., the current MIB) and the temporary map (i.e., the future/past MIB) and (2) the MIBs are structured as trees.

However, in the same field of endeavor Stevens teaches that the collected configuration information can be stored in a database operated by a directory server, wherein the information is naturally formed as trees/subtrees [Fig.1; col.2, lines 38-46]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used Stevens's directory server in Hayball's management information model, because the directory server is a popular model for collecting constantly requested information in a network environment and its efficacy has already been proven.

9. As to claim 4, Hayball further teaches that the requirements for storing the network configuration information may be reduced by storing, in said temporary map tree, the differential information that represents the difference from the current network configuration information, and the network configuration information may be obtained from said temporary map tree [col.3, lines 54-66].

10. As to claims 3 and 5, since the features of these claims can also be found in claims 1, 2 and 4, 6, they are rejected for the same reasons set forth in the rejection of claims 2, 4 and 6 above.

11. As to claims 6-7, 10-14 and 18-19, Hayball in view of Stevens teaches that historical/future data can be stored as differences between consecutive states and therefore at the retrieval stage, the difference data would have to be combined with the data specified in the current MIB. Although Hayball and Stevens do not specifically teach the detailed steps as depicted in claim 6, it is obvious that searches in both the current MIB and the past/future MIBs (which are conducted in the directory server) would have to be conducted, with search results to be combined to restore the data reflecting a specific state, wherein implementation variations in this process is considered a design choice.

As for the log map in claim 7, it is noted that Hayball teaches recording historical configuration information in a past MIB [607, Fig.8].

As for the additional steps of sorting data instructed in the request; retrieving said sorted data in the request sequentially, and checking them to determine whether what is requested is to add, modify, or delete an entry in claims 10-14: it is noted that Hayball teaches using SNMP protocol to edit (e.g., modify/update, add and delete) the MIB content [col.5, lines 4-9], wherein the information is stored in a database format. Thus, it is obvious that these additional steps are essentially conventional query processes for implementing changes to a database (via SNMP protocol), which would also be obvious

to one of ordinary skill in the art that the same procedure can be implemented in Hayball and Stevens's MIB because this is a proven, popular technique for updating database content.

12. As to claims 8-9, 25-29, 33-34 and 40-41 since the features of these claims can also be found in claims 1-7, 10-12, 14, 19 and 25, they are rejected for the same reasons set forth in the rejection of claim 1-7, 10-12, 14, 19 and 25 above.

13. Claims 15-17, 20-24, 30-32 and 35-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Yamaguchi et al. [U.S. Pat. No. 6115738]; and
Rao et al. [U.S. Pat. No. 6587456].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (703)305-4875. The examiner can normally be reached on Monday-Friday (8:00-5:00) .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (703)305-8498. The fax phone

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numbers for the organization where this application or proceeding is assigned are as follows:

(703)872-9306 for official communications; and

(703)746-5516 for status inquires draft communication.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Wen-Tai Lin

July 29, 2004

Wen-Tai Lin
7/29/04